

**AMENDMENTS TO THE DRAWINGS**

The attached sheet of drawings includes changes to Fig. 9. This sheet, which includes Fig. 9, replaces the original sheet including Fig. 9. In Fig. 9, the legend "Conventional Art" has been added.

Attachment: Replacement sheet

### **REMARKS**

Claims 4-20 are currently pending, wherein claims 1-3 have been canceled, claims 19 and 20 have been added, and claims 14-18 have been withdrawn from consideration. Applicants respectfully request favorable reconsideration in view of the remarks presented herein below.

#### **Objections to the Specification**

On page 2 of the Office Action ("Action"), the Examiner asserts that Fig. 9 should be designated as prior art because allegedly only that which is old is illustrated. Applicants hereby amend Fig. 9 to include the legend "conventional art", thereby addressing the Examiner's concerns.

On page 3 of the Action, the Examiner objects to the specification because of various typographical or translation errors. Applicants hereby amend the specification to correct the typographical and/or translation errors, thereby addressing the Examiner's concerns.

In addition, the Examiner asserts that the title is not descriptive because it allegedly does not clearly indicate the invention to which the claims are directed. Applicants respectfully disagree. The present invention is directed to an organic light-emitting device, a display apparatus incorporating the device, and a method of manufacturing a display apparatus incorporating the device, each of which are clearly indicated in the title of the invention.

#### **Rejections under 35 U.S.C. §102**

Also on page 3, the Examiner rejects claims 1 and 2 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 6,351,067 to Lee et al. ("Lee"). Applicants hereby cancel claims 1 and 2, rendering this rejection moot.

On page 4 of the Action, the Examiner rejects claims 1 and 3 under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,833,667 to Hamano et al. ("Hamano"). Applicants hereby cancel claims 1 and 3, rendering this rejection moot.

Rejections under 35 U.S.C. §103

On page 5 of the Action, the Examiner rejects claims 4-6 and 13 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,727,645 to Tsujimura et al. ("Tsujimura"), further in view of U.S. Patent No. 6,486,559 to Ueno ("Ueno"). Applicants respectfully traverse this rejection.

In order to support a rejection under 35 U.S.C. §103(a), the Action must establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness three criteria must be met. First, there must be some motivation to combine the cited references. Second, there must be a reasonable expectation of success. Finally, the combination must teach each and every claimed element. In the present case, claims 4-6 and 13 are not rendered unpatentable by the combination of Tsujimara and Ueno because the Examiner fails to establish a *prima facie* case of obviousness as discussed below.

In rejecting claims 4-6 and 13, the Examiner asserts that Ueno discloses a copper wiring structure in a semiconductor device that is buried in a groove wherein the inner wall of the groove is deposited with a diamond-like carbon film which serves as a barrier layer to prevent the copper wiring from being oxidized. Therefore, the Examiner concludes that it would have been obvious to one skilled in the art to include an "electro-conductive diamond-like carbon (amorphous carbon) film under the second conductive layer and hence between the first and second conductive layers in the contact wiring connecting the OLED to the control circuit" in order to prevent "oxidization of the conductive layer from any moisture existing in the wiring structure and thus providing a highly reliable contact wiring." This assertion is unfounded for the following reasons.

First, the mere fact that reference can be combined does not in and of itself render the resultant combination obvious. As discussed in §2143.01 of the MPEP, the prior art must also teach

the desirability of the proposed combination. Ueno is concerned with fabricating copper wiring in grooves having a large ratio between the height and width. Tsujimara is concerned providing a top emission organic LED with a high aperture ratio and less expensive construction. Nowhere in Ueno or Tsujimura is there any discussion of the desirability of preventing oxidation between conductive layers in a wiring structure for connecting an organic LED and an emission control circuit. Accordingly, absent improper hindsight reconstruction, one skilled in the art would *not* have been motivated to deposit an electro-conductive diamond-like carbon film between the first and second conductor layers as claimed.

Second, Ueno discloses depositing an amorphous carbon film between a copper wire and the grooves of an organic interlayer film. The conductive layers of Tsujimara are made of Al, Mo, Ni, or ITO not Cu. Accordingly, one skilled in the art would not have been motivated to prevent oxidation of a Cu layer to prevent oxidation, as suggested by the Examiner, in the system of Tsujimara because there are not Cu layers in the system. Accordingly, the Examiner clearly relies on improper hindsight reconstruction.

Finally, Oena discloses placing an amorphous carbon film between a Cu layer and an organic interlayer film, not between two conductive layers as claimed. Therefore, even one skilled in the art were motivated to combine Tsujimara and Oena, the combination would still fail to render claims 4-6 and 13 unpatentable because the combination fails to disclose each and every claimed element. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 4-6 and 13 under 35 U.S.C. §103(a).

On page 7 of the Action, the Examiner rejects claims 7, 8, 11, and 12 under 35 U.S.C. §103(a) as allegedly being unpatentable over Tsujimura in view of Ueno, further in view of Hamano. Applicants respectfully traverse this rejection.

Claims 7, 8, 11 and 12 variously depend from independent claim 4. Therefore, claims 7, 8, 11, and 12 are patentable over the combination of Tsujimara and Ueno for at least those reasons presented above with respect to claim 4. Hamano discloses an organic electro-luminescence element and image forming apparatus. However, Hamano fails to overcome the deficiencies of Tsujimara and Ueno.

Since Tsujimara, Ueno and Hamano each fail to disclose or suggest an organic light-emitting display apparatus that includes a wiring structure as claimed, the combination of these three references cannot possibly disclose said element. Therefore, even if one skilled in the art were motivated to combine Tsujimara, Ueno, and Hamano, which Applicants do not concede, the combination would still fail to render claims 7, 8, 11, and 12 unpatentable because it fails to disclose each and every claimed element. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 7, 8, 11, and 12 under 35 U.S.C. §103(a).

On page 8 of the Action, the Examiner rejects claims 9 and 10 under 35 U.S.C. §103(a) as allegedly being unpatentable over Tsujimura in view of Ueno and Hamano, further in view of Lee. Applicants respectfully traverse this rejection. Applicants respectfully traverse this rejection.

Claims 9 and 10 variously depend from claim 7. Therefore, claims 9 and 10 are patentable over the combination of Tsujimara, Ueno, and Hamano for at least those reasons presented above with respect to claim 7. Lee discloses an organic electroluminescent device with improved hole injecting structure. However, Lee fails to overcome the deficiencies of Tsujimara, Ueno, and Hamano.

Since Tsujimara, Ueno, Hamano, and Lee each fail to disclose or suggest an organic light-emitting display apparatus that includes a wiring structure as claimed, the combination of these three references cannot possibly disclose said element. Therefore, even if one skilled in the art were

motivated to combine Tsujimara, Ueno, Hamano, and Lee, which Applicants do not concede, the combination would still fail to render claims 9 and 10 unpatentable because it fails to disclose each and every claimed element. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 9 and 10 under 35 U.S.C. §103(a).

New claims 19 and 20 depend from independent claim 4. Therefore, claims 19 and 20 are patentable over the cited art for at least those reasons presented above with respect to claim 4.

The application is in condition for allowance. Notice of same is earnestly solicited. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Penny Caudle (Reg. No. 46,607) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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